Claims 15-28 are in the application, with Claims 15-28 having been amended and Claims 1-14 having been cancelled. Claims 15 and 22 are the independent claims. Reconsideration and further examination are respectfully requested.

The disclosure was objected to for the various typographical errors noted in the Office Action. In response, Applicants have reviewed and amended the specification, with particular attention paid to the points raised in the Office Action. Accordingly, reconsideration and withdrawal of the objection to the disclosure are respectfully requested.

Claims 1-3, 5, 7, 8-10, 12, 14, 15-17, 19, 21, 22, 24, 26 and 28 were rejected under 35 U.S.C. §102(e) by U.S. Patent No. 5,787,288 (Nagata); and Claims 1-28 were rejected under 35 U.S.C. §103 over U.S. Patent No. 5,590,373 (Whitley) in view of Nagata. Applicants have carefully considered the Examiner's remarks and the cited references and respectfully submit that the claims herein are patentably distinguishable over the cited art for at least the following reasons.

The present invention relates to an image forming apparatus in which control codes are selected to operate various image forming functions. According to the present

- 9 -

invention, in the case that the control codes are to be updated via an interface with an external apparatus, a first memory which stores control codes receives updated control codes from a second memory in the image forming apparatus which receives the updated control codes via an interface with an external apparatus. During the rewrite of the updated control codes from the second memory to the first memory, a display device on the image forming apparatus displays a message informing the operator that a download of data is being received from an external device and updating is being performed. During the display of such a message, an image forming operation cannot be conducted.

Thus, with specific reference to the claim language, amended independent Claim 15 defines an image forming apparatus for forming an image in accordance with control codes. The image forming apparatus includes a first memory medium for storing the control codes to control the image forming apparatus, display means for displaying messages associated with an image forming operation, receive means for receiving data from an external apparatus, a second memory medium for storing the data received by the receive means, and rewrite means for rewriting the control codes, which have been stored in the first memory medium. According to the invention of Claim 15, when the display means displays

a message informing of the fact that the image forming apparatus is under download of data into the second memory medium, the receive means receives rewrite execution codes, which are adapted to execute rewrite of the control codes, from the external apparatus, the received rewrite execution codes are stored in the second memory medium, the receive means receives control codes from the external apparatus, the received control codes are stored in the second memory medium, and the rewrite means rewrites the control codes, which have been stored in the first memory medium, with the control codes stored in the second memory medium in accordance with the rewrite execution codes stored in the second memory medium.

The applied art of record is not understood to disclose or to suggest the foregoing features. Nagata discloses a system for updating an internal program of an apparatus which is capable of communicating with a central station. In this regard, Nagata discloses downloading an updated control program to an apparatus from a central station and updating a control program in accordance with the downloaded update. However, nowhere does Nagata disclose or suggest displaying a message indicating that a control program is being updated.

The remaining art of record, namely, Whitley, is not understood to disclose anything which would make up for the deficiencies of Nagata. Specifically, Whitley discloses a system for updating programs in a personal communication device, wherein the updated program is input from an external apparatus and rewriting of the program is executed on the basis of the new program. However, nowhere does Whitley disclose or suggest indicating or displaying that a program is being updated. Accordingly, neither Nagata nor Whitley are understood to disclose or to suggest the features of the present invention and, in particular, displaying a message indicating that a program is being updated. Accordingly, Claim 15 is believed to be allowable.

Claim 22 is a rewrite control method claim written along the lines of Claim 15 and is believed to be allowable for the same reasons given above.

In view of the foregoing amendments and remarks, the entire application is believed to be in condition for allowance, and such action is respectfully requested at the Examiner's earliest convenience.

Applicants' undersigned attorney may be reached in our Costa Mesa, California office at (714) 540-8700. All

correspondence should continue to be directed to our below-listed address.

Respectfully submitted,

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CA_MAIN 22509 v 1

APPENDIX 1

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO SPECIFICATION

The paragraph starting at page 11, line 2 and ending at page 11, line 11 has been amended as follows:

--In addition, the CPU 1001 includes a built-in ROM 1019 in which a program for transferring a control program adapted to rewrite the flash ROM 1004, etc. based on data transmitted from an external apparatus, such as a host computer (personal computer), to the RAM 1005 is written. Also, the CPU 1001 has a [plurally] plurality of operating modes which can be selectively set by an operating mode setting unit 1018. During the normal image forming operation, the CPU 1001 is set to the mode in which the built-in ROM 1019 is not effective.--

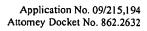The paragraph starting at page 16, line 23 and ending at page 17, line 9 has been amended as follows:

--Details of control in above step S103 will now be described with reference to a flowchart of Fig. 5. When the rewrite program transfer mode is started, the data transmitted from the external apparatus is first received in step S1031. The control flow proceeds to step S1032 to write the received data in

-i-

the RAM [105] <u>1005</u> successively. It is then determined in step

S1033 whether the received data is the last data to be

transferred. If the received data is the last data, the rewrite

program transfer process is ended and execution of the flash ROM

rewrite mode is started. If the received data is not the last

data, the control flow returns to step S1031 to repeat the above

process.--

APPENDIX 2

VERSION WITH MARKINGS TO SHOW CHANGES MADE TO CLAIMS

1. (Cancelled)

2. (Cancelled)

3. (Cancelled)

4. (Cancelled)

5. (Cancelled)

6. (Cancelled)

7. (Cancelled)

8. (Cancelled)

9. (Cancelled)

10. (Cancelled)

11.   (Cancelled)

12.   (Cancelled)

13.   (Cancelled)

14.   (Cancelled)

15.   (Amended)   An image forming apparatus <u>for</u> forming

an image in accordance with control codes [stored in a memory

medium], said image forming apparatus comprising:

a <u>first</u> memory medium for storing <u>the</u> control codes to

control said image forming apparatus; [and]

<u>display means for displaying messages associated with</u>

<u>an image forming operation;</u>

<u>receive means for receiving data from an external</u>

<u>apparatus;</u>

<u>a second memory medium for storing the data received by</u>

<u>said receive means; and</u>

rewrite means for rewriting the control codes<u>, which</u>

<u>have been</u> stored in said <u>first</u> memory medium,

<u>wherein, when said display means displays a message</u>

<u>informing of the fact that the image forming apparatus is under</u>

<u>download of data into said second memory medium,</u> said [rewrite]

<u>receive</u> means [obtaining] <u>receives</u> rewrite execution codes, which

are adapted to execute rewrite of the control codes, from [an]

<u>the</u> external apparatus, <u>the received rewrite execution codes are</u>

<u>stored in said second memory medium, said receive means receives</u>

[and receiving the] control codes from the external apparatus<u>,</u>

<u>the received control codes are stored in said second memory</u>

<u>medium, and said rewrite means rewrites</u> [to rewrite] the control

<u>codes, which have been stored in said first memory medium, with</u>

<u>the control codes stored in said second memory medium</u> in

accordance with the [obtained] rewrite execution codes <u>stored in</u>

<u>said second memory medium</u>.

16.   (Amended)   The image forming apparatus according

to Claim 15, wherein [said] <u>the</u> rewrite execution codes are

transferred to a nonvolatile memory medium <u>as said first memory</u>

<u>medium and stored therein</u>.

17.   (Amended)   The image forming apparatus according

to Claim 15, wherein [said] <u>the</u> rewrite execution codes are

transferred to a volatile memory medium <u>as said first memory</u>

<u>medium and stored therein</u>.

18.   (Amended)   The image forming apparatus according

to Claim 15, wherein the rewrite execution codes include address

information <u>of said first memory medium</u> for executing rewrite of

the control codes, and <u>said rewrite means executes the</u> [execute]

rewrite of the control codes<u>, which have been stored in said</u>

<u>first memory medium,</u> in accordance with the address information.

19.   (Amended)   The image forming apparatus according

to Claim 15, further comprising image forming control means for

controlling an image forming process <u>in accordance with the</u>

<u>control codes</u>, and switching means for exclusively changing over

whether the image forming process is executed by said image

forming control means or rewrite of the control codes is executed

by said rewrite means.

20.   (Amended)   The image forming apparatus according

to Claim 19, wherein said switching means exclusively changes

over using a predetermined switch whether the image forming

process is executed by said image forming control means or <u>the</u>

rewrite of the control codes is executed by said rewrite means.

21.   (Amended)   The image forming apparatus according

to Claim 19, wherein said switching means exclusively changes

over in accordance with a predetermined command transmitted from

said external apparatus whether the image forming process is

executed by said image forming control means or <u>the</u> rewrite of

the control codes is executed by said rewrite means.

22.   (Amended)   A rewrite control method for an image

forming apparatus forming an image in accordance with control

codes<u>, which have been</u> stored in a <u>first</u> memory medium, said

rewrite control method comprising:

[an obtaining] <u>a first receiving</u> step of [obtaining]

<u>receiving</u> rewrite execution codes, which are adapted to execute

rewrite of <u>the</u> control codes [to control said image forming

apparatus], from an external apparatus;

<u>a first storing step of storing the received rewrite</u>

<u>execution codes in a second memory medium;</u>

<u>a second receiving step of receiving control codes from</u>

<u>the external apparatus;</u>

-v-

a second storing step of storing the received control

codes in the second memory medium;

a rewriting step of [receiving] rewriting the control

codes, which have been stored in the first memory medium, with

the control codes stored in the second memory medium [from the

external apparatus], in accordance with the rewrite execution

codes [obtained by said obtaining step, and rewriting the control

codes] stored in said second memory medium; and

a displaying step of displaying a message informing of

the fact that the image forming apparatus is under download of

data into the second memory medium.

23.   (Amended) The rewrite control method for the

image forming apparatus according to Claim 22, further comprising

a transfer step of transferring the rewrite execution codes from

the second memory medium to a nonvolatile memory medium as the

first memory medium.

24.   (Amended) The rewrite control method for the

image forming apparatus according to Claim 22, further comprising

a transfer step of transferring the rewrite execution codes from

the second memory medium to a volatile memory medium <u>as the first</u>

<u>memory medium</u>.

25. (Amended) The rewrite control method for the

image forming apparatus according to Claim 22, wherein the

rewrite execution codes include address information <u>of the first</u>

<u>memory medium</u> for executing rewrite of the control codes, and

[execute] <u>the</u> rewrite of the control codes <u>is executed</u> in

accordance with the address information.

26. (Amended) The rewrite control method for the

image forming apparatus according to Claim 22, further comprising

an image forming control step of controlling an image forming

process <u>in accordance with the control codes</u>, and a switching

step of exclusively changing over whether the image forming

process is executed by said image forming control step or rewrite

of the control codes is executed by said rewriting step.

27. (Amended) The rewrite control method for the

image forming apparatus according to Claim 26, wherein said

switching step exclusively changes over using a predetermined

switch whether the image forming process is executed by said

image forming control step or the rewrite of the control codes is

executed by said rewriting step.

28. (Amended) The rewrite control method for the

image forming apparatus according to Claim 26, wherein said

switching step exclusively changes over in accordance with a

predetermined command transmitted from said external apparatus

whether the image forming process is executed by said image

forming control step or the rewrite of the control codes is

executed by said rewriting step.

CA_MAIN 22505 v 1